



WORLD INTELLECTUAL PROPERTY ORGANIZATION International Bureau



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 7: C12Q 1/68		A1	(11) International Publication Number: WO 00/20631
			(43) International Publication Date: 13 April 2000 (13,04,00)
(21) International Application Number: PCT/GB99/03264 (22) International Filing Date: 4 October 1999 (04.10.99)			CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC,
(30) Priority Data: 9821427.3 9821428.1 9903441.5	2 October 1998 (02.10.98) 2 October 1998 (02.10.98) 15 February 1999 (15.02.99)	G	Published With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

- BIOMEDICA LTD [GB/GB]; 183 Euston Road, London NW1 2BE (GB).
- (72) Inventors; and (75) Inventors/Applicants (for US only): SYKES, Bryan [GB/GB]; Institute of Molecular Medicine, John Radcliffe Hospital, University of Oxford, Oxford OX3 9DS (GB). LOUGHLIN, John [GB/GB]; Institute of Molecular Medicine, John Radcliffe Hospital, University of Oxford, Oxford OX3 9DS (GB). CARR, Andrew [GB/GB]; Nuffield Orthopaedic Centre, Windmill Road, Oxford OX3 7LD (GB).
- (74) Agents: BRASNETT, Adrian, H. et al.; Mewburn Ellis, York House, 23 Kingsway, London WC2B 6HP (GB).

(71) Applicant (for all designated States except US): CATALYST

(54) Title: SUSCEPTIBILITY LOCUS FOR OSTEOARTHRITIS

(57) Abstract

It is known that various loci within the genome affect the susceptibility of an individual to osteoarthritis. The present invention relates to the identification of a genetic region that may contain an osteoarthritis susceptibility locus. A genome-wide linkage analysis was carried out using families affected by osteoarthritis. Results were stratified according to sex and joint affected. This produced evidence for linkage of markers on chromosome 2q. A denser map was then produced using more markers in this region. Transmission disequilibrium analysis of the markers highlighted by the linkage analysis revealed disequilibrium at markers D2S117 and D2S325, indicating the presence of an osteoarthritis susceptibility locus in the chromosomal region close to these markers.